

### Abstract

The variation of shades due to light transmissivity controlled by a property device is suppressed with a simple structure. An optical device 1 that blocks light having a wavelength longer than a predetermined wavelength is disposed in a property device 20 that is composed of for example liquid crystal and that can control light transmissivity. The optical device 1 blocks light having a longer wavelength than a wavelength at which a wavelength band of which the wavelength dependency of spectrum characteristic of the property device 20 is weak changes to a wavelength band of which the wavelength dependency of spectrum characteristic of the property device 20 is strong. The optical device 1 blocks light having a longer wavelength than a predetermined wavelength emitted from an object. The property device 20 controls the light transmissivity and enters the light to an image sensor 3. The optical device 1 is capable of selectively entering light having a wavelength band whose spectrum characteristic is stable to the image sensor 3. Even if the light transmissivity of the property device 20 is varied, the color balance is kept nearly constant.